

REMARKS

We have amended claims to more particularly point out and distinctly claim the invention. After the amendments claims 1-57 are presently pending in this application.

The Examiner rejected claims 1-3, 20, 22-25, 28-33, 50, 52-55, and 61-62 under 35 U.S.C. §103(a) as being unpatentable over Phaal (U.S. 6,006,269 A) in view of Cobb et al. (U.S. 6,070,197 A). The Examiner argues that Phaal discloses all of the elements of claim 1 except one. More specifically, the Examiner admits that “Phaal does not explicitly teach that the scheduler is client side.” And to supply that which is missing, the Examiner relies on Cobb, which supposedly teaches a client-side scheduler. The Examiner argues:

It would have been obvious to...modify the system of Phaal in view of Cobb by implementing a client-side scheduler. One would be motivated to do so because Phaal suggests “Other mechanisms for assisting admissions control on the client side may be used.”

We disagree, however, with the Examiner’s analysis for at least the following two reasons: (1) Phaal’s scheduler performs functions different from those claimed and moreover it will not work on the client side; and (2) Cobb’s scheduler does not function as required by the claims.

With regard to the first reason, we note that Phaal’s scheduler needs to be on the server side. It manages the resources of the host and needs to see all of the demands that are being placed on that resource by the plurality of client computers. This is apparent from the following description of Phaal’s system:

The client side 13 may include many individual personal computers 19, which may each contact the host side 15 via a complicated network of communications paths and nodes. Irrespective of the particular communication path, the host side 15 receives a stream of incoming messages 21 which may access one or more web pages stored on the server 17, and provides a stream of outgoing response messages 23 in response. (Col. 5, lines 17-23).

Phaal’s scheduler also needs to be on the same side of the connection as the resource that is being managed since it needs to have access to information about the capacity of the managed resource. This is apparent from the role Phaal’s scheduler plays as described by Phaal:

When the admission control gateway receives a message that calls for a new client session, the gateway determines whether a processing threshold has been reached; if the threshold has been reached or surpassed, the message is passed to the deferral manager to formulate a response to the particular client. The scheduler is checked to determine a time when the host can expect to have processing resources available, and the deferral manager then formulates a time indication which tells the client when the client can expect to gain admission to the host. (Col. 2, lines 48-58).

In more detailed features of this first form of the invention, the deferral manager can determine a time for admission based on the use of reserved time slots, which are allocated on a first-come, first-served basis; optionally, a client can be afforded a choice of these slots, to pick a time convenient for the client's user. The deferral manager can then formulate a countdown time and provide the particular client both with the countdown time and a "key" that will enable the client to gain preferred access to the host at expiration of the countdown time. (Col. 2, line 50-Col 3, line 1).

For purposes of assigning future times or appointments, the scheduler can operate in several different ways, for example, by setting "appointments" using a maximum number of new sessions per minute, or by monitoring periodic host activity and assigning future sessions when the host is normally "less busy." For example, if regular monitoring reveals that the host is usually not busy between 3:00 and 5:00 O'clock, the deferral manager could tell the client to try again during that time interval. (Col. 3, lines 8-15).

If Phaal's scheduler is moved to the client-side, as the Examiner appears to be suggesting, it cannot perform the functions that are required of it because: (1) it will not know what other clients are also making requests of the host; and (2) it will not have access to the server and thus will be unaware of what resources are available for scheduling/allocation.

Though Cobb does indeed mention a client-side scheduler, as pointed out by the Examiner, Cobb's client-side scheduler does not perform the same functions as those recited in the claims. Cobb notes the following about its client-side scheduler:

An additional, client side scheduler is Transarc ENCINA. These TP monitors simplify application development because the application program (the client program) do not have to include the details of scheduling a shared resource. The TP monitor handles support for multithreaded processing and asynchronous scheduling of processes to increase throughput. The TP monitor ensures that all terminals are serviced and transactions handled. (Col. 6, lines 29-37).

Cobb is simply referring to scheduling a shared resource so that, for example, multiple program threads get fair access to that shared resource. The scheduling functions that are described are not the same as those recited in the claims. They do not involve detecting when a connection to a resource is established and then notifying the threads of the established connection to the

resource. Rather, Cobb's scheduler assumes the resource is available and it simply assures the fair allocation of that available resource among multiple threads.

We could find nothing in either Cobb or Phaal about a client-side scheduler that performs the functions of "storing the request entry until a connection from the client computer to the server computer can be established;" "detecting when a connection from the client computer to the server computer is established;" "notifying the client-side code that the connection from the client computer to the server computer over the network is established;" and then "using the connection to the server computer to send the request to the server computer," as recited in the claims as now amended.

We recognize that Phaal does explicitly state that "[o]ther mechanisms for assisting admissions control on the client side may be used." However, that is not a suggestion to employ a scheduler of the type recited in the claims. It is nothing more than a suggestion to employ admission control on the client side. Admission control is simply a way of queuing the requests for an available resource so that everybody gets access on a fair basis or according to some pre-established rules.

For the reasons stated above, we believe that the claims are allowable and therefore ask the Examiner to allow them to issue.

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Respectfully submitted,

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